[10191/2328]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Frank KOWALEWSKI
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For	:	DATA TRANSMISSION METHOD
Examiner	:	Anh-Vu H. LY
Art Unit	:	2616
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APPELLANT'S APPEAL BRIEF
UNDER 37 C.F.R. § 41.37

S I R :

Applicant filed a Notice of Appeal dated February 22, 2007 (received at the PTO on February 27, 2007), appealing from the Final Office Action dated August 22, 2006, in which claims 9-16 of the above-identified application were finally rejected. This Brief is submitted by Applicant in support of his appeal.

I. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH of Stuttgart, Germany. Robert Bosch GmbH is the assignee of the entire right, title, and interest in the present application.

II. RELATED APPEALS AND INTERFERENCES

No appeal or interference which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal is known to exist to the undersigned attorney or is believed by the undersigned attorney to be known to exist to Applicant.

III. STATUS OF CLAIMS

Claims 9-16 remain pending in the present application, and claims 9-16 are being appealed. Claims 1-8 were canceled in the Preliminary Amendment dated March 29, 2002. Among the appealed claims, claim 9 is independent and claims 10-16 ultimately depend on claim 9.

IV. STATUS OF AMENDMENTS

No amendment has been made subsequent to the final Office Action mailed on August 22, 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

With respect to independent claim 9, the present invention provides a data transmission method including:

transmitting a data signal between a transmitter and a receiver as a data stream of data bursts (B) in at least a first transmission mode and a second transmission mode; (Fig. 1a; Substitute Specification, p. 4, l. 10-26);

in the first transmission mode, transmitting a reference signal (RS) by the transmitter in each data burst (B), the reference signal being evaluated in the receiver; (Fig. 1b; Sub. Spec., p. 4, l. 28-30); and

in the second transmission mode, avoiding transmitting the reference signal by the transmitter in each data burst (B) and instead transmitting additional redundancy data (RD) of the data signal in each data burst (Fig. 1c; Sub. Spec., p. 5, l. 1-3).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review on appeal in this case:

(A) Whether pending claims 9, 10, 13 and 15-16 are anticipated under 35 U.S.C. § 102(e) by U. S. Patent No. 6,724,815 ("Jepsen").

(B) Whether claims 11 and 12 are unpatentable under 35 U.S.C. § 103(a) over Jepsen in view of U.S. Patent No. 5,113,413 ("Brown").

(C) Whether claim 14 is unpatentable under 35 U.S.C. § 103(a) over Jepsen in view of U.S. Patent No. 6,760,589 ("Hobbis").

VII. ARGUMENTS

A. Rejection of Claims 9, 10, 13, and 15-16 under 35 U.S.C. § 102(e)

Claims 9, 10, 13, 15, and 16 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,724,815 B1 ("Jepsen"). Applicant respectfully submits that the rejections should be withdrawn, for at least the following reasons.

To anticipate a claim under §102(e), each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 105 3 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the

prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the anticipation rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 9 recites, in relevant parts, a data transmission method including: "transmitting a data signal between a transmitter and a receiver as a data stream of data bursts in at least a first transmission mode and a second transmission mode; in the first transmission mode, transmitting a reference signal by the transmitter in each data burst, the reference signal being evaluated in the receiver; and in the second transmission mode, **avoiding transmitting the reference signal** by the transmitter in each data burst **and instead transmitting additional redundancy data** of the data signal in each data burst."

In support of the rejection, the Examiner contends in the final Office Action that the last feature of claim 9, i.e., "avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst," is disclosed by Jepsen at column 8, lines 10-13, and Fig. 4 (". . . the enhanced units being characterized by being able to transmit data instead of midamble and being able to receive GSM signals with midamble replaced by the user data."). In this regard, the Examiner further contends that since "[t]he specification does not specifically define what type of data should be considered as redundancy data," the "examiner interprets redundancy data, as recited in claim 9, as an extra data or a redundant data or user data or more than what [is] usually transmitted normally in a frame."

Initially, with respect to the Examiner's asserted interpretation of claimed "additional redundancy data," Applicant submits that the asserted interpretation is clearly contradicted by the Applicant's specification and the general understanding of the phrase in the art. Applicant notes that the "broadest reasonable interpretation" of a claim is not made in vacuum; instead, the long-

standing rule of claim interpretation is that the pending claims should be given the broadest reasonable interpretation **that is consistent with the specification and the interpretation that those skilled in the art would reach**. (See M.P.E.P. 2111, citing In re Hyatt, 211 F.3d 1367 (Fed. Cir. 2000), and In re Cortright, 165 F.3d 1353 (Fed. Cir. 1999)). Applicant's Specification clearly defines "redundancy signal data" as "additional data redundancy in the form of **repeated data symbols**, as illustrated in Fig. 1c." (Substitute Specification, p. 5, l. 1-3; see also 6/27/06 Amendment). Furthermore, the meaning of "additional redundancy data" is well-understood in the art, e.g., Wikipedia defines "redundancy in information theory" as "the number of bits used to transmit a message minus the number of bits of actual information in the message." (See http://en.wikipedia.org/wiki/Redundancy). When viewed in light of the Applicant's disclosure and the general understanding in the art, the broadest reasonable interpretation of the claimed feature of "additional redundancy data" cannot be so broad as the Examiner's asserted interpretation.

Jepsen clearly does not provide any suggestion regarding redundant (repeated) data; instead, Jepsen merely transmits additional data to provide an increased data rate (e.g., col. 1, lines 64-67; col. 3, lines 50-51), i.e., Jepsen achieves increased data rate by replacing the midamble by user data (col. 8, l. 11-12). The additional data disclosed in Jepsen is completely different from, and completely unrelated to, the "additional redundancy data" recited in the present claims, particularly since the additional redundancy data inserted by the present invention refers to repeated data and cannot be used to increase the data rate. Based on the teachings of Jepsen, one of ordinary skill in the art would not be able to arrive at the claimed subject matter of claim 9, because the objective of Jepsen (to increase the data rate by inserting additional, not previously sent data) is exactly opposite of the present invention, i.e., to insert redundant data repetition in order to improve error correction.

To the extent the Examiner contends in the Advisory Action (2/7/07) that the claimed "redundancy signal data" cannot be defined as "additional data redundancy in the form of **repeated data symbols**," and that Applicant cannot argue that "the additional redundancy data inserted by the present invention refers to repeated data and cannot be used to increase the data rate," because claim 1 does not explicitly recite these exact terms, the Examiner is essentially

contending that Applicant's specification cannot be referenced to interpret a claim, which argument is clearly incorrect both legally and factually. First, Applicant notes that the Examiner's own interpretation of "redundancy signal data" involves terms not explicitly recited in the claim ("examiner interprets redundancy data, as recited in claim 9, as an extra data or a redundant data or user data or more than what [is] usually transmitted normally in a frame.") In any case, as noted above, the "broadest reasonable interpretation" of a claim is **not made in vacuum**; instead, the broadest reasonable interpretation is one **that is consistent with the specification and the interpretation that those skilled in the art would reach**. (See M.P.E.P. 2111, citing In re Hyatt, 211 F.3d 1367 (Fed. Cir. 2000), and In re Cortright, 165 F.3d 1353 (Fed. Cir. 1999)). Since Applicant's Specification clearly defines "redundancy signal data" as "additional data redundancy in the form of **repeated data symbols**, as illustrated in Fig. 1c," (Substitute Specification, p. 5, l. 1-3; see also 6/27/06 Amendment), and since the meaning of "additional redundancy data" is well-understood in the art (e.g., "redundancy in information theory" is defined as "the number of bits used to transmit a message minus the number of bits of actual information in the message," see http://en.wikipedia.org/wiki/Redundancy), there is simply no basis for the Examiner to contend that "[t]he specification does not specifically define what type of data should be considered as redundancy data," and it is clearly incorrect that the "examiner interprets redundancy data, as recited in claim 9, as an extra data or a redundant data or user data or more than what [is] usually transmitted normally in a frame." Furthermore, since the additional redundancy data inserted by the present invention clearly does refer to repeated data, it is a factually correct statement that the redundancy signal data of the present invention "cannot be used to increase the data rate," which is directly contrary to the teachings of Jepsen (i.e., transmitting additional data to provide an increased data rate).

For at least the foregoing reasons, Jepsen clearly fails to teach "avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst," as recited in claim 9. For at least the foregoing reasons, independent claim 9, as well as its dependent claims 10, 13, 15, and 16, are not anticipated by Jepsen, and the anticipation rejection should be reversed.

B. Rejection of Claims 11 and 12 under 35 U.S.C. 103(a)

Claims 11 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jepsen in view of U.S. Patent No. 5,113,413 ("Brown"). Applicant respectfully submits that this rejection should be withdrawn, for at least the following reasons.

In rejecting a claim under 35 U.S.C. §103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091 (Fed. Cir. 1986). Third, the prior art references must teach or suggest all of the claimed limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claims 11 and 12 ultimately depend from, and incorporate the features of, independent claim 9. As noted above, Jepsen clearly fails to teach "avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst," as recited in claim 9. In addition, the Brown reference fails to cure the deficiencies of the primary Jepsen reference as applied against parent claim 9, since Brown fails to teach or suggest "avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst." For at least this reason, it is submitted that the combination of Jepsen and Brown fails to render obvious dependent claims 11 and 12.

In view of the above, reversal of the obviousness rejection of claims 11 and 12 is therefore respectfully requested.

C. Rejection of Claim 14 under 35 U.S.C. 103(a)

Claim 14 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jepsen in view of U.S. Patent No. 6,760,589 ("Hobbis"). Applicant respectfully submits that this rejection should be withdrawn, for at least the following reasons.

In rejecting a claim under 35 U.S.C. §103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091 (Fed. Cir. 1986). Third, the prior art references must teach or suggest all of the claimed limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claim 14 ultimately depends from, and incorporate the features of, independent claim 9. As noted above, Jepsen clearly fails to teach "avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst," as recited in claim 9. In addition, the Hobbis reference fails to cure the deficiencies of the primary Jepsen reference as applied against parent claim 9, since Hobbis clearly fails to teach or suggest "avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst." For at least this reason, it is submitted that the combination of Jepsen and Hobbis fails to render obvious dependent claim 14.

Independent of the above, Applicant notes that Hobbis is not a valid prior art reference against the present application, since the earliest effective priority date of the present application for the purposes of §102(a) and §102(e) is September 30, 1999 (the German priority filing date), which is well before the 102(e) date of Hobbis (April 6, 2001) and the publication date of Hobbis (July 6, 2004; corresponding PCT application published on March 2, 2000). Furthermore, the effective U.S. filing date of the present application is September 28, 2000, which means Hobbis

can not be §102(b) reference against the present application. Since Hobbis is not a valid prior art reference against the present application, the obviousness rejection based on Jepsen and Hobbis must fail.

In view of the above, reversal of the obviousness rejection of claim 14 is therefore respectfully requested.

VIII. CONCLUSION

For the foregoing reasons, it is respectfully submitted that the final rejections of claims 9-16 should be reversed.

Claims Appendix, Evidence Appendix and Related Proceedings Appendix sections are found in the attached pages.

Respectfully submitted,

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APPENDIX TO APPELLANT'S APPEAL BRIEF UNDER 37 C.F.R. § 41.37

CLAIMS APPENDIX

The claims involved in this appeal, claims 9-16, in their current form after entry of all amendments presented during the course of prosecution, are set forth below:

9. A data transmission method, comprising:

transmitting a data signal between a transmitter and a receiver as a data stream of data bursts in at least a first transmission mode and a second transmission mode;

in the first transmission mode, transmitting a reference signal by the transmitter in each data burst, the reference signal being evaluated in the receiver; and

in the second transmission mode, avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst.

10. The method according to claim 9, wherein:

the additional redundancy data are provided by data of the data signal that are transmitted in repetition.

11. The method according to claim 10, wherein:

the data transmitted in repetition are received in repetition by the receiver and are evaluated separately in the receiver.

12. The method according to claim 11, further comprising:

selecting a data version of the data transmitted in repetition having a stronger received signal for at least one of further processing and delivery to a user.

13. The method according to claim 9, further comprising:

in the second transmission mode, eliminating interference in the transmitter.

14. The method according to claim 9, further comprising:

transmitting a plurality of data streams simultaneously according to a CDMA technique.

15. The method according to claim 9, wherein:

the data bursts have at least two data blocks, between which a block is arranged which is used, in the first transmission mode, for the reference signal, and which is used, in the second transmission mode, for the additional redundancy data.

16. The method according to claim 9, further comprising:

selecting a data format for the data signal to be transmitted in both the first transmission mode and the second transmission mode so as to be identical.

EVIDENCE APPENDIX

In the present application, there has been no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131 or 1.132, or other evidence entered by the Examiner and relied upon by Appellants in the present appeal.

RELATED PROCEEDINGS APPENDIX

No appeal or interference which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal is known to exist.